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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/040,192	10/26/2001	Kyoung Woo Lee	2080-3-46	9032

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EXAMINER
ALI, MOHAMMAD

ART UNIT	PAPER NUMBER
2177	

DATE MAILED: 02/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>26 October 2001</u>.

2a)☐ This action is **FINAL**.　　2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
　　closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-30</u> is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-30</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☒ All　b)☐ Some * c)☐ None of:

　　　1.☒ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
　　　　　application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
　　Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. The application has been examined. Claims 1-30 are pending in this Office

Action.

Priority

2. Receipt is acknowledged of papers submitted under 35 USC 119(a)-(d), which

papers have been placed of record in the file.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

4. Claims 1-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Jones et al. ('Jones' hereinafter), US Patent 6,134,243 in view of Mika Rinne ('Rinne'

hereinafter), US Patent 5,946,326.

With respect to claim 1,

Jones discloses an apparatus for providing a streaming service (see col. 9, lines

9-15), comprising:

a header object having basic information about a file and information for an

application service (see col. 10, lines 39-45, Fig. 4);

a data object synchronizing multimedia data with temporal information and

storing it (see col. 1, lines 39-47 et seq); and

a key index object storing an offset and temporal information of a video block

having a key frame in video blocks as a basis on a time axis for random access (see

col. 10, lines 38-49, Fig. 4 et seq).

Jones does not explicitly indicate the claimed "reproduction"

Rinne teaches claimed reproduction (the pages can be reproduced as complete

at the reception end as each file is defined both with respect to its contents and with

respect to other files both temporally and locally, see col. 6, lines 7-10).

It would have been obvious to one ordinary skill in the data processing art at the

time of the present invention to combine the teachings of the cited references because

reproduction of Rinne's teachings would have allowed Jones system to transmit the

information to the transmission channel in a continuous data stream, as suggested by

Rinne at col. 1, lines 12-13, Fig. 4. Reproduction as taught by Rinne improves the

multimedia services to form a hypertext by combining the service components of the

subchannels in the stream video (see col. 4, lines 22-28).

As to claim 2,

Jones teaches wherein the header object includes: a descriptor for classification

or index of a file (see col. 12, lines 65-67 et seq);

a FILEINFO (file information) storing overall information of the file (see col. 55-

60); an

AUDIOINFO (audio information) storing information about audio media (see col.

14, lines 13-19, Fig. 6);

a VIDEOINFO (video information) storing information about video media in video

blocks of the data object (see col. 14, lines 13-19);

an OFFSETINFO (offset information) defining a position of the data object and a

position of the key index object in the file (see col. 11, lines 24-29); and

a CLIPINFO (additional information) providing additional information to a user

(see col. 23, lines 7-9).

As to claim 3,

Jones teaches wherein the header object further includes a reserved field (see

col. 4, lines 39-45, Fig. 4).

As to claim 4,

Jones teaches wherein the reserved field is a TEXTINFO (text information)

adding a caption function to a moving picture (see col. 14, lines 9-15, Fig. 6).

As to claim 5,

Jones teaches wherein the TEXTINFO includes: a font field indicating a font of text (see Fig. 6 and col. 14, lines 9-10);

a color field indicating a color of text (see Fig. 6 et seq);

a size field indicating a size of text (col. 14, lines 9-15 et seq); and

a reserved field for future applications (see col. 15-18 et seq).

As to claim 6,

Jones teaches wherein the descriptor includes: a length field indicating a total size of the header object as a byte unit (see col. 10, lines 35-49, Fig. 4); and

an object type field indicating a kind of the object (see col. 10, lines 35-49, Fig. 4).

As to claim 7,

Jones teaches wherein the FILEINFO includes: a version filed indicating version information a file format (see col. 25, lines 1-2 et seq);

an ID field indicating a file generation end time with a stream ID (see col. 10, lines 35-49, Fig. 4);

a file length field indicating the total length of the file (see col. 10, lines 35-49, Fig. 4);

a playtime field indicating the total time (see col. 10, lines 35-49, Fig. 4);

an encoding rate field indicating an encoding rate defined by a user (see col. 12, lines 55-60);

a video number field indicating the number of encoded video frames in the data

object of the file (see co. 14, lines 15-17);

an I-frame number field indicating the number of I-frames in the encoded video

frames in the data object of the file (see col. 12, lines 55-60 et seq);

a P-frame number field indicating the number of P-frames in the encoded video

frames in the data object of the file (see col. 14, lines 15-17 et seq);

an audio number field indicating the number of encoded audio blocks in the data

object of the file (see col. 14, lines 15-17);

a biggest video frame field indicating a size of the biggest video frame in the

encoded video frames in the data object of the file (see col. 14, lines 9-20 et seq); and

a reserved field reserved for future applications (see col. 10, lines 35-49, Fig. 4).

As to claim 8,

Jones teaches wherein the AUDIOINFO includes: an audio codec type field

indicating a kind of audio codec having a generated audio block in the data object (see

col. 14, lines 15-17);

an audio rate field indicating an audio encoding rate (see col. 12, lines 55-60);

and

an reserved field reserved for future applications (see col. 14, lines 14-17).

As to claim 9,

Jones teaches the VIDEOINFO includes: a video codec type field indicating a

kind of video codec having a generated video block in the data object (see col. 14, lines

15-17);

a video rate field indicating a video encoding rate (see col. 14, lines 14-15);

a frame rate field indicating the number of encoded video frames of the video

frame (see col. 12, lines 55-60);

a key frame rate field indicating the number of insertion frames of an I-frame (see

col. 10, lines 35-45);

a screen size field indicating a size of the encoded screen (see col. 12, lines 55-

60); and

a reserved field reserved for future applications (see col. 14, lines 14-19 et seq).

As to claim 10,

Jones teaches wherein the OFFSETINFO includes: a data offset field indicating a

position of the data object (see col. 10, lines 35-45);

a key index offset field indicating a position of the key index object as an offset

value in the file (see col. 10, lines 35-45, Fig. 4); and

a reserved field reserved for future applications (see col. 14, lines 14-19, Fig. 6).

As to claim 11,

Jones teaches wherein the CLIPINFO includes: a title field indicating a title of the

file (see col. 10, lines 35-45);

an author field indicating a creator of the file (see col. 10, lines 35-45);

a URL field indicating a URL related to the file (see col. 14, lines 14-19 et seq);

and

a description field providing general explanation about the file (see col. 10, lines

35-45).

As to claim 12,

Jones teaches wherein the header object further includes a reserved field used in upgrade version or change (see col. 10, lines 35-45).

As to claim 13,

Jones teaches wherein the reserved field is a TEXTINFO (text information) adding a caption function to a moving picture (see col. 14, lines 8-11 et seq).

As to claim 14,

Jones teaches wherein the data object transmits each media simultaneously or separately according to data media type (see col. 9, lines 5-15).

As to claim 15,

Jones teaches wherein the data object includes: a video block having information about video in multimedia data (see col. 14, lines 14-19); and

an audio block having information about audio in multimedia data (see col. 14, lines 14-19).

As to claim 16,

Jones teaches wherein the data object further includes a media block for an additional service (see Abstract).

As to claim 17,

Jones teaches wherein the video block has a video payload (video storage) storing video encoding frames (see col. 12, lines 55-60).

As to claim 18,

Jones teaches wherein the audio block has one audio storing payload (audio storage) or a plurality of audio payloads storing audio encoding frames (see col. 12, lines 55-60).

As to claim 19,

Jones teaches wherein the video block includes: a descriptor for classification or index of video block information (see col. 14, lines 14-19, Fig. 6);

a TSINFO (time stamp information) proceeding synchronization by defining a difference value between an initial time stamp in encoding (see col. 12, lines 55-60); and

a video payload (storage) storing actual encoded video data (see col. 14, lines 14-19).

As to claim 20

Jones teaches wherein the descriptor includes: a length field indicating a size of the video payload as a byte unit (see col. 10, lines 35-45); and

an object type field indicating a kind of the object (see col. 10, lines 35-45).

As to claim 21

Jones teaches wherein the TSINFO includes: a time stamp field indicating differences between an early time stamp (see col. 25, lines 1-2); and

a reserved field reserved for future applications (see col. 14, lines 8-19).

As to claim 22

Jones teaches wherein the key index object includes: a descriptor for classification or index of information (see col. 10, lines 35-45); and

a KEYINFO (key information) storing information about each key frame of video

frames (see col. 14, lines 8-19, Fig. 4).

As to claim 23

Jones teaches wherein the descriptor includes: a length field indicating the total

size of the KEYINFO as a byte unit (see col. 10, lines 35-45); and

an object type field indicating a kind of the object (see col. 10, lines 35-45).

As to claim 24

Jones teaches wherein the KEYINFO includes: an offset field indicating an offset

value of serial key frame (see col. 11, lines 24-25); and

a time stamp field comparing a time stamp value of a pertinent key frame with a

time stamp value of the data object (see col. 25, lines 1-2).

With respect to claim 25,

Jones discloses in an apparatus for storing data, an apparatus for providing a

streaming service (see col. 9, lines 9-15), comprising:

a header object having basic information about a file and information for an

application service (see col. 10, lines 39-45, Fig. 4);

a data object synchronizing multimedia data with temporal information and

storing it (see col. 1, lines 39-47 et seq); and

a key index object storing an offset and temporal information of a video block

having a key frame in video blocks as a basis on a time axis for random access (see

col. 10, lines 38-49, Fig. 4 et seq).

Jones does not explicitly indicate the claimed "reproduction"

Rinne teaches claimed reproduction (the pages can be reproduced as complete at the reception end as each file is defined both with respect to its contents and with respect to other files both temporally and locally, see col. 6, lines 7-10).

It would have been obvious to one ordinary skill in the data processing art at the time of the present invention to combine the teachings of the cited references because reproduction of Rinne's teachings would have allowed Jones system to transmit the information to the transmission channel in a continuous data stream, as suggested by Rinne at col. 1, lines 12-13, Fig. 4. Reproduction as taught by Rinne improves the multimedia services to form a hypertext by combining the service components of the subchannels in the stream video (see col. 4, lines 22-28).

With respect to claim 26,

Jones discloses method for providing a streaming service (see col. 9, lines 9-15), comprising:

a client/server connecting process for receiving header object information from a server and transmitting a transmission instruction to the server by a client (see col. 10, lines 39-45, Fig. 4);

a transmission mode selecting process for selecting a transmission mode by receiving the transmission instruction and reading each block of data object with a memory by the server (see col. 1, lines 39-47 et seq);

a packet transmitting process for packeting each block into a moving picture stream and transmitting it to the client by the server (see col. 10, lines 38-49, Fig. 4 et seq);

a depacketing process for receiving the moving picture stream packet and

obtaining a stream by depacketing the received moving picture stream packet by the

client (see col. 9, lines 9-15 et seq); and

a moving picture reproducing process the multimedia data by synchronizing the

stream by the client (see col. 1, lines 39-40 et seq).

Jones does not explicitly indicate the claimed "reproduction"

Rinne teaches claimed reproduction (the pages can be reproduced as complete

at the reception end as each file is defined both with respect to its contents and with

respect to other files both temporally and locally, see col. 6, lines 7-10).

It would have been obvious to one ordinary skill in the data processing art at the

time of the present invention to combine the teachings of the cited references because

reproduction of Rinne's teachings would have allowed Jones system to transmit the

information to the transmission channel in a continuous data stream, as suggested by

Rinne at col. 1, lines 12-13, Fig. 4. Reproduction as taught by Rinne improves the

multimedia services to form a hypertext by combining the service components of the

subchannels in the stream video (see col. 4, lines 22-28).

As to claim 27

Jones teaches wherein the server is in an audio transmission mode and

transmits only audio when a network bandwidth is low, the server is in a video

transmission mode and transmits only video when the network bandwidth is

intermediate, the server is in a video/audio simultaneous transmission mode and

transmits both video and audio when the bandwidth is sufficiently high in the

transmission mode selecting process (see col. 14, lines 8-19, Figs. 4, 6).

As to claim 28

Jones teaches wherein a media type transmission mode is added besides the

audio or video transmission mode (see col. 14, lines 14-15).

As to claim 29

Jones teaches wherein the client can reproduce a moving picture in real time by

obtaining a time stamp of the moving picture in a TSINFO (time stamp information) of a

video block and an audio block and synchronizing the video block and the audio block

placed at the same time according to the time stamp of the moving picture in the moving

picture reproducing process (see col. 14, lines 8-19 col. 1, lines 39-40).

As to claim 30

Jones teaches wherein the client can reproduce a certain point of the moving

picture by transmitting a time stamp of a moving picture to be reproduced to the server

through a set position instruction, obtaining a time stamp (see col. 25, lines 1-2, Fig. 6)

of the moving picture and an offset value matched to the time stamp of the moving

picture in a KEYINFO (key frame information) of a key index object, reading a video

block and an audio block at the offset position and receiving it from the server receiving

the set position instruction (see col. 14, lines 8-19).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. US Patent 5,903,892 issued to Hoffert et al. teaches stream data, synchronization multimedia data.

b. US Patent 6,041,345 issued to Levi et al. teaches stream data, synchronization multimedia data

Contact Information

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammad Ali whose telephone number is (703) 605-4356. The examiner can normally be reached on Monday to Thursday from 7:30am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on (703) 305-9790 or Customer Service (703) 306-5631. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306 for any communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-9600.

Mohammad Ali

Patent Examiner

AU 2177

MA

February 5, 2004